

PATENT SPECIFICATION



Application Date: Oct. 8, 1937. No. 27364/37.

503,539

Complete Specification Left: Jan. 14, 1938.

Complete Specification Accepted: April 11, 1939.

PROVISIONAL SPECIFICATION

Improvements in the Production of Surfaces for Building
and like purposes

I, DEZSO KOMLOS, a citizen of Hungary, of 88, Brookside Road, Golders Green, London, N.W.4, do hereby declare the nature of this invention to be as follows:—

This invention relates to the production of surfaces for building and like purposes and is particularly applicable to the production of jointless floor and wall finishes.

The invention consists in preparing a surfacing composition in the form of a plastic mass composed mainly of sand with the addition of a filler having irregular particle shapes and low oil absorption proportion, and a binder consisting of a stand-oil of a drying or semi-drying nature, a synthetic resin, and a solvent, and then spreading the plastic mass upon the surface or base to be covered.

By the term "a filler having irregular particle shapes" is meant material of granular form the particles of which have shapes which are irregular and differ one from another, as will be produced for example by reducing the material to a granular form by grinding and as distinct from the regular particle forms of crystalline granules.

According to a preferred method of carrying out the invention a surfacing composition of sand, filler and binder is prepared in the form of a plastic mass which can be spread with a trowel upon the surface to be covered. The sand must be free from clayey and organic matter. The binder is made up of the following ingredients, the proportions being given by weight:—

Blown Linseed oil (sp. gr. 0.999)	-	3	parts
Synthetic Resin ("Albertol III")	-	-	1 part
White Spirit	-	-	13 parts
Turpentine	-	-	1 part

One half of the quantity of the linseed oil is heated to about 150° C. The synthetic resin is mixed with it stirring till all dissolved. The remainder of the ingredients—linseed oil, white spirit, and turpentine—are then added, and when cool the binder is ready for use.

[Price 1/-]

To prepare the mix the sand is dried and cooled. The dried sand is mixed in a rotating drum or similar mixer with a suitable filler such as strontium sulphate or micro-asbestos or both, in the following proportions (by weight):—

80% sand.	
10% strontium sulphate.	
10% micro-asbestos.	

or

85% sand.	
15% strontium sulphate.	

A suitable colouring matter may be added, which may be up to 2% according to requirements and the whole is intimately mixed dry.

The binder is now added to the dry mix in an edge runner mill or other suitable mixer. Proportions used and found satisfactory are 100 parts (by weight) of the dry mix with 8 parts of binder. When the binder has penetrated throughout the mix, the material is ready for laying.

The material is laid with a trowel and worked to the desired smoothness of finish in a normal manner. Under summer conditions a floor surface laid in the beforementioned manner can be walked on two days after laying, and is fit for normal use in about four to five days.

If the material cannot be laid immediately after mixing, it can be stored for some hours under favourable conditions by sealing it to exclude light and air in suitable containers.

Before laying the material on a floor such as a concrete floor, the existing surface should be swept clean and may then be wiped over with a mixture of 3 parts blown lined oil stand-oil (or other stand-oil of a drying or semi-drying nature) without driers, and 1 part of lime hardened rosin or a rosin ester. To this may be added a suitable plasticiser, such as tricresyl-phosphate. The mixture should be applied in a warm condition. The application of this mixture provides a resilient thin film between the substructure and the surface layer and has been found to assist the production of jointless surfaces which are not liable to crack.

The invention is not limited to the

BEST AVAILABLE COPY

precise details set out in the above description of a preferred method. Thus, in the place of blown linseed oil, other stand-oils of a drying or semi-drying nature may be used, for example wood-oil stand-oil, also boiled linseed oil stand-oil. Other solvents than turpentine and white spirit may be used, and the synthetic resin may be varied. Suitable fillers, besides strontium sulphate and micro-asbestos, are barium sulphate, barium or strontium carbonates, and magnesium silicate. In general it has been found that it is necessary to choose a filler having irregular particle shapes and low oil absorption properties. Fine powdery substances of regular particle shape are to be avoided.

Suitable disinfectants, such as formaldehyde, boracic or salicylic acids, thymol and hyperol may be added to the composition prior to laying. Odorants and deodorants such as pine-oils, terpenes, terpinol, terpineol and the like may also be added.

The proportions of sand, filler and binder may also be varied. Thus, in another example, 59% (by weight) of sand, 30% of barium sulphite and 2% colouring matter may be mixed with 9% of binder.

Dated this 8th day of October, 1937.

RAYNER & Co.,

5, Chancery Lane, London, W.C.2,
Agents for the Applicant.

COMPLETE SPECIFICATION

Improvements in the Production of Surfaces for Building and like purposes

I, DEZSO KOMLOS, a citizen of Hungary, of 88, Brookside Road, Golders Green, London, N.W.4, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The invention relates to the production of surfaces for building and like purposes and is particularly applicable to the production of jointless floor and wall finishes.

The invention consists in preparing a surfacing composition in the form of a plastic mass composed mainly of sand with the addition of a filler having irregular particle shapes and low oil absorption properties, and a binder consisting of a stand-oil of a drying or semi-drying nature, a synthetic resin and a solvent, and then spreading the plastic mass upon the surface or base to be covered.

By the term "a filler having irregular particle shapes" is meant material of granular form the particles of which have shapes which are irregular and differ one from another as will be produced for example by reducing the material to a granular form by grinding and as distinct from the regular particle forms of crystalline granules.

According to a preferred method of carrying out the invention, the surfacing composition is prepared in the following manner. The binder is made up of the following ingredients, the proportions being given by weight:—

Blown Linseed oil (sp. gr. 0.999)	
containing suitable driers	- 3 parts
Synthetic Resin ("Albertol"	
(Registered Trade Mark)	
III")	- 1 part
White Spirit	- 1½ parts
Turpentine	- ½ part

One half of the quantity of the linseed oil is heated to about 150° C. The synthetic resin is mixed with it, stirring till all dissolved. The remainder of the ingredients—linseed oil, white spirit, and turpentine—are then added, and when cool the binder is ready for use.

To prepare the mix the sand (which must be free from clayey or organic matter) is dried and cooled. The dried sand is mixed in a rotating drum or similar mixer with a filler, such as strontium sulphate or micro-asbestos or both. The quantities of sand and filler may be in the following proportions (by weight):—

80% sand.	
10% strontium sulphate.	
10% micro-asbestos.	
or	
85% sand.	
15% strontium sulphate.	

A suitable colouring matter may be added which may be up to 2% according to requirements, and the whole is intimately mixed dry.

The binder is now added to the dry mix in an edge runner mill or other suitable mixer. Proportions used and found satisfactory are 100 parts (by weight) of the dry mix with 8 parts of binder. When

the binder has penetrated throughout the mix, the material is ready for laying.

The material is laid with a trowel and worked to the desired smoothness of finish in a normal manner. Under summer conditions a floor surface laid in the before-mentioned manner can be walked on two days after laying, and is fit for normal use in about four to five days.

If the material cannot be laid immediately after mixing, it can be stored for some hours under favourable conditions by sealing it to exclude light and air in suitable containers.

Before laying the material on a floor such as a concrete floor, the existing surface should be swept clean and may then be wiped over with a mixture of 3 parts blown linseed oil stand-oil (or other stand-oil of a drying or semi-drying nature) without driers, and 1 part of lime hardened rosin or a rosin ester. To this may be added a suitable plasticiser, such as tricresyl-phosphate. The mixture should be applied in a warm condition. The application of this mixture provides a resilient thin film between the sub-structure and the surface layer and has been found to assist the production of jointless surfaces which are not liable to crack.

The invention is not limited to the precise details set out in the above description of a preferred method. Thus, in the place of blown linseed oil, other stand-oils of a drying or semi-drying nature may be used, for example wood-oil stand-oil, also boiled linseed oil stand-oil. Other solvents than turpentine and white spirit may be used, and the synthetic resin may be varied. Suitable fillers, besides strontium sulphate, and micro-asbestos, are barium sulphate, barium or strontium carbonates, and magnesium silicate. In general it has been found that it is necessary to choose a filler having irregular particle shapes and low oil absorption properties. Fine powdery substances of regular particle shape are to be avoided.

Suitable disinfectants such as formaldehyde, boracic or salicylic acids, thymol and hyperol (hydrogen-superoxide), may be added to the composition prior to laying. Odorants and deodorants such as pine-oils, terpens, terpinol, terpineol may also be added.

The proportions of sand, filler and binder may also be varied. Thus in another example, 59% (by weight) of sand, 30% of barium sulphate, and 2% colouring matter may be mixed with 9% of binder.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

(1) A method of producing surfaces for building and like purposes which consists in preparing a surfacing composition in the form of a plastic mass composed mainly of sand with the addition of a filler having irregular particle shapes and low oil absorption properties, and a binder consisting of a stand-oil of a drying or semi-drying nature, a synthetic resin and a solvent, and spreading the said plastic mass upon the surface or base to be covered.

(2) A method as claimed in claim 1 in which the filler consists of strontium sulphate, micro-asbestos, barium sulphate, barium carbonate, strontium carbonate, magnesium silicate or a mixture of any of the said compounds.

(3) A method as claimed in claim 1 in which the surface or base to be covered is treated with a mixture of stand-oil of a drying or semi-drying nature (without driers) and a lime hardened rosin or a rosin ester prior to the spreading of the plastic mass.

(4) A composition for producing surfaces for building and like purposes in the form of a plastic mass composed mainly of sand with the addition of a filler having irregular particle shapes and low oil-absorption properties and a binder consisting of a stand-oil of a drying or semi-drying nature, a synthetic resin, and a solvent.

(5) A composition for producing surfaces for building and like purposes according to claim 4 and in which the filler consists of strontium sulphate, micro-asbestos, barium carbonate, barium sulphate, strontium carbonate, magnesium silicate or a mixture of any of the said compounds.

Dated this 13th day of January, 1938.

RAYNER & Co.,

5, Chancery Lane, London, W.C.2,
Agents for the Applicant.